



Towards a systemic understanding of sustainable wellbeing for all in cities: A conceptual framework

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ARTICLE INFO

Keywords:

Sustainable wellbeing
Social equity
Urban policy
Ecological crisis
Policy evaluation

ABSTRACT

We are facing socio-ecological crises and failing to meet the basic needs of everyone in society whilst living within planetary boundaries. These interconnected problems are complex, which require urgent transdisciplinary efforts informed by theories of change. How can we address this in cities in a way that is equitable and sustainable, since cities are complex, dynamic ecosystems with interdependent relationships? What processes, dynamics and determinants are involved? What and how are local policies designed and implemented with the intention of achieving sustainable wellbeing for all? How do normative competences shape cities' capacities to directly respond to social and ecological needs? How can we effectively assess and compare advancements being made in different cities? Given this complexity, more systemic, integrated, and theoretical understanding is needed. We present a new conceptual framework which aims to strengthen understanding of the processes, dimensions, determinants, bi-directional relations and dynamics that influence the opportunities for cities to become more equitable and sustainable. The framework places a specific emphasis on political determinants, and can serve as a tool to guide public policy design and evaluation, and monitoring of the progress made across the various dimensions of sustainability wellbeing for all in different urban contexts.

There is growing concern about the pressing socio-ecological crises that we are facing globally, and the urgent need to act to ensure that the needs of current and future generations are met whilst living within planetary boundaries (Rockström et al., 2009; Steffen et al., 2015; Raworth, 2017; Gough, 2017; Hickel, 2018; Benach, 2020; Fanning et al., 2021; Romanello, 2022; Benach et al., 2022). Cities have a key role to play in preventing and tackling these crises (Hoorweg et al., 2016; Crane et al., 2021), yet how can they achieve this in a way that is fair and sustainable? (Biloria, 2021; Pineo, 2022). Which processes, dynamics and determinants are involved? What policies have been planned and implemented in cities so far with the intention of achieving this? How do normative competences shape cities' capacities to directly respond to socio-ecological (unmet) needs? How can we effectively assess and compare advancements being made in different cities?

Cities are dynamic ecosystems with their own metabolism, social and ecological attributes, interdependent relationships, and power dynamics, which can determine and be determined by many factors and actors (Hoorweg et al., 2016; Ulgiati & Zucaro, 2019; Iyer et al., 2021). Local governments need to balance the design and implementation of social, economic and environmental policies that support the functioning of the city, meet social/human needs (Gough, 2015; Gough, 2017), and address local environmental risks, whilst also responding to other competing interests and normative constraints at the regional and national levels. Since the interconnected problems are complex, finding solutions requires urgent transdisciplinary efforts informed by theories of change (Geng et al., 2019; Ivàlua, 2009; Ling, 2012). To support this, we need a more systematic, integrated and theoretical understanding of what local governments can realistically do to work towards a

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sustainable, inclusive, healthy, and equitable urban environment (Iyer et al., 2021; Pineo, 2020; Pineo, 2022), which includes the interconnected processes, dimensions, and determinants involved. This type of systemic understanding is important for considering causal pathways and informs effective progress assessments and policy-making at the local level.

We present an innovative conceptual framework and integrated approach that aims to guide understanding of the interdependent processes, dimensions, determinants, bi-directional relationships and dynamics that shape and influence the opportunities for cities to achieve sustainable wellbeing for all. Particular emphasis is placed on political determinants, with the intention of informing effective assessments, and public policy design and evaluation at the city level, to support the necessary transformational changes at the scale and speed required to meet human and planetary health needs (Crane et al., 2021; Benach et al., 2022). To develop the framework, we conducted a critical review of the interdisciplinary literature and existing conceptual frameworks on planetary wellbeing, sustainable wellbeing and development (Gough, 2017; Raworth, 2012; Raworth, 2017; Rockström et al., 2009; United Nations, 2015), public policy analysis and evaluations (Ivãlua, 2009; OECD, 2020), urban health and planning (Barton & Grant, 2006; Pineo, 2020; Pineo, 2022), and social determinants of health and health inequalities (Solar & Irwin, 2010; Marí-Dell’Olmo et al., 2022). Our framework is systems-oriented, and integrates diverse disciplinary perspectives to emphasise relevant factors and relationships to strengthen understanding and monitoring of progress towards achieving equitable and sustainable urban environments (see Fig. 1).

Firstly, our framework proposes that for cities to become more sustainable, they must meet social/human needs, ensure social, environmental, and intergenerational justice, whilst living safely within planetary boundaries (Rockström et al., 2009; Gough, 2015; Gough, 2017; Marí-Dell’Olmo et al., 2022; Raworth, 2012; Raworth, 2017). The outer layers stress the boundaries and importance of the ecological ceiling and the social foundation (Raworth, 2017; Rockström et al., 2009), and highlight how activities within cities both influence and are influenced by the wider global context (Crane et al., 2021; Iyer et al., 2021; Geng et al., 2019). It also emphasises how cities must continuously work to create a resilient, regenerative, self-sufficient, as well as

inclusive and equitable environments (Crane et al., 2021; OECD; Pineo, 2020; Pineo, 2022; Biloría, 2021). This includes a better understanding, as well as more moderate scales of consumption, metabolism and transformation of essential resources (such as materials, energy, and water), which need to be guided by a fair, efficient, and sustainable distribution of resources, processes and practices (Pineo, 2022; Ulgiati & Zucaro, 2019).

In addition, similarly to the social determinants of health perspective (Solar & Irwin, 2010), the framework proposes that there are structural determinants that operate through a range of intermediary determinants to influence and shape the opportunities for cities to meet the social needs of all. These determinants shape the opportunities to create certain healthy and equitable urban living and working environments, influencing behavioural patterns and lifestyle choices (Barton & Grant, 2006; Gough, 2015; Gough, 2017; Pineo, 2020; Pineo, 2022), as well as the possibilities to reduce their carbon and material footprints and live within ecological limits (Geng et al., 2019). For example, socially vulnerable populations living in cities often have limited options to live and work in areas conducive to good health and/or to move away from unhealthy work and living environments (Pineo, 2022). In turn, these circumstances further shape the opportunities for people from different social groups to achieve good health and wellbeing outcomes (Solar & Irwin, 2010). The framework also considers Gough’s (2015, 2017) theory of human need, where human needs are considered to be universal goals (e.g. opportunities to actively participation in society, and achieve their full physical and mental health potential etc.) (Whitehead, 1990), whilst need satisfiers (e.g. adequate access to food and water, protective housing and security etc.) and their institutional satisfiers and societal preconditions are more context specific.

Structural determinants of sustainable wellbeing and good health for all, include specific historical, socio-economic and political contexts, which consist of interacting macro-level factors (e.g., macroeconomic and public policies, socio-cultural values, among others), which change over time and interact with the axes of inequalities to generate, configure and maintain social structures (Solar & Irwin, 2010; Marí-Dell’Olmo et al., 2022). These upstream determinants themselves are often conditioned by historical legacies and systems of privilege and oppression (such as capitalism, colonialism, racism and patriarchy),

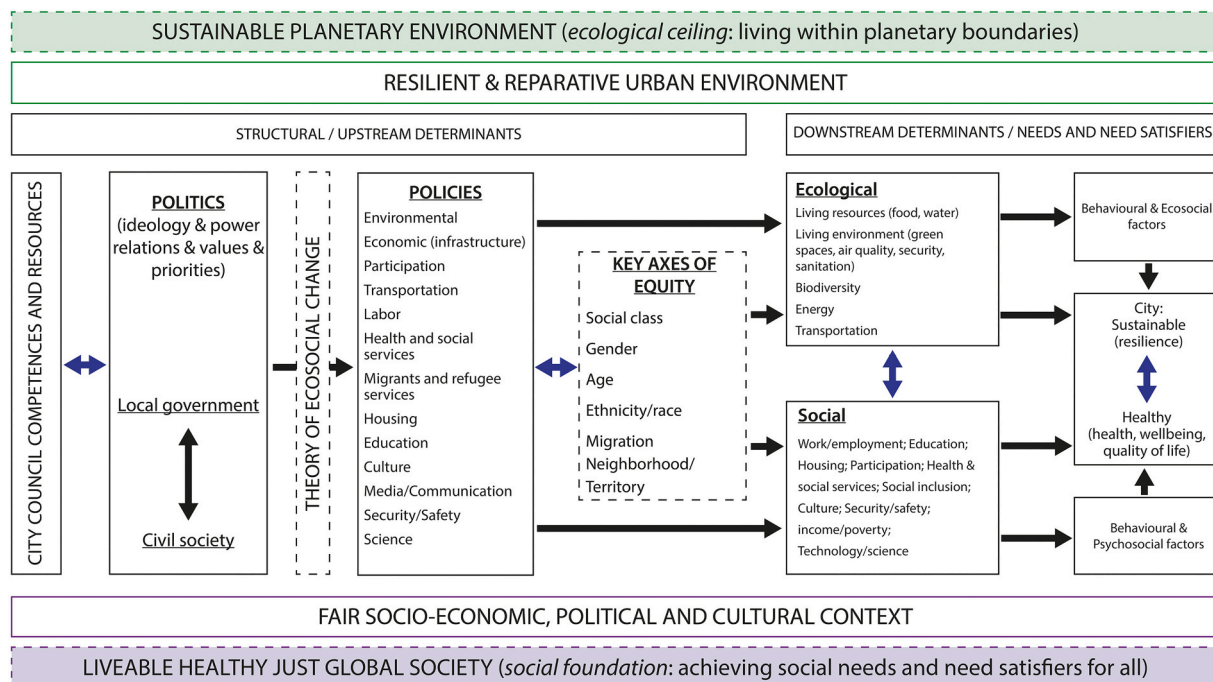


Fig. 1. Towards a systemic understanding of sustainable wellbeing for all in cities: A conceptual framework.

which are considered to be some of the root causes of climate change, ecological degradation and social inequalities in health (Marí-Dell'Olmo et al., 2022; Krieger, 2019; Solar & Irwin, 2010).

Specific emphasis is also placed on political determinants, given the important role of local government resources, competencies, power relations and the interaction with civil society, which condition what can be realistically achieved within a city in terms of meeting social and ecological needs (Solar & Irwin, 2010; Gough, 2015; Gough, 2017; Muntaner et al., 2012; Crane et al., 2021). For instance, competencies can shape the scope of policy interventions made at the local level, and therefore the effectiveness of local authorities' actions to meet social needs. In some cases, local governments have the power to distribute resources according to local population needs. In other cases, due to the political division of a country, competences are reserved to the state and/or regional levels, or when states are inserted in an integration economic model such as the European Union, some competences are reserved to supranational level, which limits local authorities' ability to directly address these needs in the same way. This is important to consider when making local policy recommendations. In addition, the conceptual framework emphasises the important of the theory of change when designing and evaluating complex interventions and public policies aiming to be more socially and environmentally just and sustainable (Breuer et al., 2015; Ivàlua, 2009; Ling, 2012; OECD, 2020). Furthermore, the framework emphasises that embedded within and across different scales are different institutional and individual views, values and ideologies about the causes of socio-ecological crises and related inequalities, what is fair and what needs to be done in order to create more equitable and sustainable societies, as well as the role and responsibility of the State in meeting population and planetary health and wellbeing needs (Bambra et al., 2005; Cash-Gibson et al., 2020; Muntaner et al., 2012).

The conceptual framework is purposefully universal. It can act as a heuristic tool to guide public policy design and evaluation, as well as comprehensive assessments and monitoring of the progress made across the different socio-ecological dimensions of sustainable wellbeing for all in different urban contexts. It can also be used for teaching purposes to provide clarity and help emphasise the interconnected nature of the socio-ecological challenges that we are currently facing and need to urgently address in order to survive and thrive. In addition, it can serve as a starting point for further evaluation and conceptual development. For example, we encourage adaptation and testing of the framework through co-creation processes in different urban contexts to support context-specific assessments and evaluations, as well as the development of more complex-systems models which explicitly incorporate the feedback loops discussed and help to explore how outcomes might change under different circumstances. Such work can assist to identify entry points for future effective interventions, and to adapt, design and implement policies to their specific settings.

In sum, working towards a healthy, equitable and sustainable urban environment is an on-going, iterative, context-specific process for current and future generations rather than a fixed end state (Pineo, 2022; Crane et al., 2021). To this end, it is essential to develop tools for an increasingly integrated understanding of the complexity of these challenges, whilst promoting democratic participation, to enable people to support each other in performing all functions of life and developing their full potential.

CRedit authorship contribution statement

Conceptualization (Lead): JB, LCG
 Conceptualization (Support): EMH, FMI, JMH
 Writing – original draft: LCG
 Writing – review & editing: LCG, EMH, FMI, JMH, JB.

Conflict of interest

The authors declare they have no competing interests.

Data availability

No data was used for the research described in the article.

Acknowledgements

JB is a recipient of an ICREA Acadèmia (Generalitat de Catalunya).

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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